

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kyouhiro Yoshida  
Serial No. : 10/562,630  
Filed : December 23, 2005  
Title : COMMUNICATION MODULE

Art Unit : 2841  
Examiner : Xiaoliang Chen  
Conf. No. : 8597

**Mail Stop Amendment**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REPLY TO ACTION OF NOVEMBER 19, 2007

Claims 1-6 are pending for further examination.

Applicant respectfully requests reconsideration and withdrawal of the claim rejections in view of the following remarks.

Claim Rejections

Claims 1-2 and 4-6 were rejected under 35 U.S.C. §102(b) as anticipated by Maruyama et al. (U.S. Patent App. No. 2004/0208211).

Claim 3 was rejected under 35 U.S.C. §103(a) as unpatentable over the Maruyama et al. reference in view of Asano et al. (U.S. Patent App. No. 2004/0227677).

Asano et al. reference is not prior art

As a preliminary matter, Applicant submits that neither the Maruyama et al. reference nor the Asano et al. reference is prior art under 35 U.S.C. §102(a) or §102(b). The present application is a U.S. national stage application of an international PCT application, filed on June 7, 2004, that designated the U.S.. Accordingly, the effective U.S. filing date of the present application is June 7, 2004, which is earlier than the publication dates of the Asano et al. reference (November 18, 2004) and the Maruyama et al. reference (October 21, 2004). Therefore, those references are not prior art to the present application under §102(a) or §102(b).

Furthermore, the present application claims priority to a Japanese patent application filed June 26, 2003, which is earlier than the U.S. filing date of the Asano et al. reference (March 30,

2004). Accordingly, the Asano et al. reference also is not prior art to the present application under §102(e).

Therefore, the rejections should be withdrawn based on the Asano et al. reference and the Maruyama et al. reference should be withdrawn.

Claims 1-6 are patentable over the Maruyama et al. reference

Independent claim 1 recites a communication module that includes a “flexible printed circuit board” and a “stem” through which the flexible board is inserted and to which the flexible board is fixed. An example of those features is shown in FIG. 1 of the present application. In that example, a communication module 1 includes a semiconductor laser 10 mounted on a flexible printed circuit board 11. The flexible board 11 is inserted through and fixed to a stem 12. The flexible board 11 includes a base material of flexible polyimide. A portion of the board 11 protrudes from the stem 2 and electrically couples to another circuit board (*see* para. 24, 29-31).

In conventional applications, it is important that the communications module be accurately aligned with and coupled to (in both the vertical and horizontal directions) a subsequent circuit board on which external components are mounted. Accordingly, by forming the board 11 of a flexible material which can be bent, the present device provides, in some implementations, enhanced compliance and resilience to facilitate coupling the communications module to a subsequent circuit board.

The Maruyama et al. reference, however, does not disclose a communications module that includes a “flexible” board inserted through and fixed to a stem as recited in pending claim 1. Although the Maruyama et al. reference discloses flexible wiring board 400 (*see* FIG. 14B), the board 400 is not inserted through and fixed to can-stem 1, which the Examiner alleges corresponds to the claimed “stem” (*see* Office action pg. 2).

Rather, FIG. 1 of the Maruyama et al. reference clearly shows that it is substrate 3 that is inserted through and fixed to can-stem 1. However, the substrate 3 is formed from a *ceramic*, such as alumina or aluminum nitride, and not a flexible material. Accordingly, the Maruyama et

Applicant : Kyouhiro Yoshida  
Serial No. : 10/562,630  
Filed : December 23, 2005  
Page : 3 of 3

Attorney's Docket No.: 20057-002US1 / PCT-2004-  
008US

al. reference fails to disclose a "flexible printed circuit board" that is inserted through and fixed to a stem as recited in pending claim 1.

In view of the foregoing reasons, claim 1 should be allowed.

Claims 2-6 depend from claim 1 and should be allowable for at least the same reasons as claim 1.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper.

No fee is believed due. However, please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

February 19, 2008

Date: \_\_\_\_\_

/Richard P. Ferrara/

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